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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,852	07/09/2003	Malcolm Reginald Hallis Bell	1193-4049	1841
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MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER SHAPIRO, JEFFERY A	
			ART UNIT 3653	PAPER NUMBER
			NOTIFICATION DATE 01/11/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/616,852

Applicant(s)

BELL ET AL.

Examiner

Jeffrey A. Shapiro

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/30/07 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The language added to Independent Claims 1, 8, 14, 21 and 27 which states in Claim 1 "to modify the acceptance criteria to a restricted acceptance window, which excludes lower and upper safety margins" is not found anywhere in Applicants' disclosure.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Art Unit: 3653

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-32 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. Applicants, from p.16, last two lines, to p.17, line 14 have alleged that the Steiber reference is inoperative for two-way communication between cash machines (12) and (13) because they communicate through a Bluetooth based network. However, Applicants' disclosure at paragraph 6 describes the use of a Bluetooth standard for communication between their cash machines. If a Bluetooth-based network renders Seiber's device inoperative, then it is reasonable to make the conclusion that Applicants' system must also be inoperative as it is disclosed as it is also based on a Bluetooth-standard network.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molbak (US 6,494,776 B1) in view of Dobbins et al (US 5,730,272) and further in view of Stieber et al (US 2002/0100660A1).

Molbak discloses, as described in **Claims 1, 8, 14, 20, 21 and 27**, several automatic coin counting devices (100), each with a coin acceptor (1872), said coin

Art Unit: 3653

acceptor connected with and communicating over a network through network interface/communication means (1826, 1828). See also col. 4, line 59-col. 5, line 5 and col. 11, line 66-col. 12, line 61. See also figures 2, 18a and 18b.

As described in **Claims 1, 8, 14, 20, 21 and 27**, Molback does not expressly disclose, but Stieber discloses a modular network of multiple cash handling devices coupled with each other, in which each component cash handler communicates with a central controller as well as other cash handling machines. See Stieber, figure 1 and paragraphs 8, 10, 15, 16 and 19-27. Regarding 1st, 2nd and 3rd acceptors in communication with each other, note paragraph 26, which discusses connection of up to eight cash acceptors in a bluetooth-based piconet. Paragraph 16, lines 10-14, mentions that wireless protocols other than bluetooth, such as infrared IrDa, Home RF, and SWAP (shared wireless access protocol) may be used. Note also that paragraph 15 discloses that both cash machines (12 and 13) both have transceivers, which are used for both transmission of as well as receiving data.

At the time of the invention, it would have been obvious to incorporate a modular networked system in Molbak's currency discrimination system, as taught by Steiber, for the purpose of increasing flexibility by increasing the range of cash handling tasks available to the system. See Steiber, paragraph 6.

Molbak does not expressly disclose, but Dobbins discloses a currency acceptor (10) having a sensing means (see Dobbins, elements 21, 22, 24 and 25 and col. 6, lines 60-66), processing means (35), said processing means sending an alarm upon detection of a fraud attempt, said alarm causing said processor to modify its acceptance

Art Unit: 3653

criteria. See Dobbins, col. 2, lines 14-18 and col. 7, lines 1-59, noting in particular col. 7, lines 44-60.

Dobbins also discloses, as described in **Claims 2-6, 9-13, 15-19, 22-26 and 28-32**, said condition comprises at least one of the sensed parameters since inductive sensor (26) senses coin parameters including diameter and material. Additionally, as described, for example, in col. 2, lines 15-17 and col. 7, lines 12-30, the window of an acceptance region of genuine coins is made smaller so as to segregate and therefore increase the rejection of fraudulent coins.

At the time of the invention, it would have been obvious to replace Molbak's currency discrimination system with that of Dobbins' discrimination system and method of rejecting non-genuine coins upon detection of a fraud attempt, causing the acceptance criteria/acceptance window to be changed so as to screen out said non-genuine coins. See Dobbins, cited above. Note that it would have also been obvious to communicate said information over Molbak's communication means since Molbak's system discloses such communication between the coin acceptor and the central computer facility. See Molbak Claim 1, for example.

The suggestion/motivation would have been to improve acceptance and rejection of coins, including an improved rate of rejection by modifying the acceptance criteria. See Dobbins, col. 2, lines 8-15. Note also that Molbak describes providing modem communications for uploading or downloading data in col. 12, lines 11-21, of which acceptance alarms and currency discriminator acceptance criteria is considered to be such data which can be easily communicated through a modem connection to a central

Art Unit: 3653

computer. It also would have been obvious to have one acceptor alert Molbak's other acceptors to an attempt of fraud in one acceptor, thereby causing other acceptors to narrow their acceptance windows, as taught by Dobbins.

Response to Arguments

7. Applicant's arguments filed 10/30/07 have been fully considered but they are not persuasive.

Steiber clearly discloses networked cash handling devices communicating both with a central controller as well as each other. Again, see Stieber at paragraph 8. Molbak, as the primary reference, provides the basic disclosure that teaches several automatic coin counting devices (100), each with a coin acceptor (1872), said coin acceptor connected with and communicating over a network through network interface/communication means (1826, 1828), as discussed above. Dobbins discloses a currency acceptor (10) having a sensing means (see Dobbins, elements 21, 22, 24 and 25 and col. 6, lines 60-66), processing means (35), said processing means sending an alarm upon detection of a fraud attempt, said alarm causing said processor to modify its acceptance criteria.

Steiber's teaching further buttresses the combination of Molbak and Dobbins by providing the teaching of a network of currency acceptors which communicate back and forth between each other. Applicants assert that Stieber only teaches one-way communication by other cash acceptors with the base device. However, Stieber teaches that each cash acceptor (12 and 13) as well as the peripheral devices have a transceiver (24), as illustrated in figures 2 and 3 and discussed at paragraph 16. A

Art Unit: 3653

tranceiver allows both communication from and to a device. This teaching of networking cash acceptors together through networks so that they communicate with each other, combined with the teaching of Dobbins for cash acceptors to issue warnings of fraud attempts and alter acceptance criteria accordingly, would have led one of ordinary skill in the art to have combined Molbak's cash acceptors into networks in which they communicate fraud attempts with each other, with one or any of the cash acceptors communicating with and controlling other acceptors. Thus, it would have been obvious to exchange alarm signals between cash handling devices, based upon Dobbins' teaching, for the purpose of providing fraud alarms to each linked cash device, each said device then altering their acceptance criteria accordingly.

Applicants assert that the amended independent claims do not read on the combination of Dobbins, Molbak and Steiber because of the phrase "to modify the acceptance criteria to a restricted acceptance window, which excludes lower and upper safety margins." However, Dobbins, Molbak and Steiber still disclose, teach and suggest Applicants' claimed apparatus. First, Applicants point to the Dobbins passage at col. 9, lines 50-51 and assert that the acceptance box of Dobbins is not changed in response to fraud attempts, but instead to compensate for changes in temperature, humidity or component wear.

Specifically, the passage at col. 9, lines 47-57 reads

It should be noted that in order to stabilize the measurements and maintain a high degree of genuine coin acceptance with varying environmental changes, historical information for each of the C.sub.0 and V vectors must be maintained, and these vectors must also be varied when system parameters change

Art Unit: 3653

due to temperature, humidity, component wear and the like. These vectors point to the idle operating state of the system and are functions of parameters which may experience step changes as well as slow variations, all of which require compensation and adaptive tracking to provide a stable operating platform.

However, note that Dobbins defines the C0 vector as the relation between the X1, X2, X3 coordinate system and the X1', X2', X3' coordinate system and the V vectors V1, V2 and V3 as vectors that relate the X1', X2', X3' coordinate system with the X1'', X2'', X3'' coordinate system, which is the coordinate system that locally relates to Dobbins' three-dimensional variance window. See figure 4 of Dobbins.

Therefore, this passage is only referring to the atmospheric and external effects on the positioning of the coordinate systems with respect to each other.

In contrast, Dobbins at col. 9, lines 57-60 states

Also, while the V vectors for all coin types are compensated in exactly the same manner, they can also be compensated as a function of coin denomination.

Therefore, Dobbins expressly states that even the V vectors can be compensated for based upon the coin denomination acceptance criteria, since determining the denomination of the coin is only obtained through application of acceptance criteria through testing. Dobbins does teach at col. 6, line 55-col. 7, line 20, that the adjustment of the upper and lower limits of a three dimensional acceptance window, having each axis of the coordinate system representing a different coin acceptance criterion, i.e, for each denomination.

Dobbins does state at col. 7, lines 12-20 that

As discussed further in connection with FIGS. 7B, 7C and 7D below, counterfeit coins or slugs may have sensor measurement distributions which fall within or overlap those for a genuine coin. For example, a slug may have

characteristics which fall within region R.sub.A of FIG. 3 because the slug exhibits properties which overlap those of a valid coin of that denomination. Although tighter limits on the acceptance region R.sub.A may screen out such slugs, such a restriction will also increase the rejection of genuine coins.

Note that R. sub. A. is defined as the acceptance region in three dimensions. As can be seen from this prior passage, as well as the others described above, Dobbins does not preclude adjusting the upper and lower regions of R.sub.A. On the contrary, in stating that counterfeit coins or slugs may have sensor measurements that overlap those of acceptable coins, Dobbins only states that such adjusting of the upper and lower limits of R.sub.A. will include acceptable coins in the group of coins rejected under the adjusted window.

Applicant additionally mentions the "cheat mode" which invokes Dobbins' routine. One ordinarily skilled would have found it obvious to disable or not invoke this routine. See again, col. 11, lines 59-66 and figure 8 of Dobbins. Thus, Dobbins uses the adjusted window technique along with movement of the entire window away from an overlapping area, as illustrated in figures 7a-d and at figure 4. Dobbins does not teach away by precluding use of the adjusted window technique alone. Additionally, note Dobbins, Claim 1, which states in the last two lines that the process "modifies the acceptance window if the cumulative sum exceeds a preset number". This preset number is also interpreted as an upper limit. Note that the step before this one recites the step of "incrementing a cumulative sum if the test signal is within the deviation limit and above the pre-defined point.." This deviation limit is considered to also have an upper and a lower limit. Looking back even further, note the first step of the method,

which states "defining a deviation limit having a range of values surrounding a predefined point of the acceptance window." This range of values is construed as having an upper and a lower limit.

Regardless of whether Dobbins is using the adjusted window technique or the overlap technique, Applicants' new claim limitations states

wherein the processing means is configured to respond to an alarm signal, received by said communication means via the network, to modify the acceptance criteria to a restricted acceptance window, which excludes lower and upper safety margins.

Thus, Applicants' claims only require modifying the acceptance window, which Dobbins teaches at col. 6, line 55-col. 7, line 11. Note also that one ordinarily skilled in the art would have been motivated to use only modifying the acceptance window as described at col. 6, line 55-col. 7, line 11 without the additional technique where the value of the coins that would be excluded is minimal compared to the amount of fraud prevented. Note also that the performance of additional steps is saved, thus saving time and processing power.

Even when Dobbins' additional technique is used, note that when Dobbins' system modifies the window by including the overlapped areas, it is conceivable that if the test data of the slug overlaps the data of the normal coin in areas of upper and lower safety margins, i.e., upper and lower limits, that said areas would necessarily be included. Note also that the opposite can conceivably occur, where overlapping areas include the area within the upper and lower safety margins or bands. Thus, the upper and lower safety margins would be preserved so as not to eliminate the acceptable coins.

Note also that basic statistical quality control techniques would also mandate using a tighter sigma value where a bell curve has a particular acceptance value that will not yield an acceptable reject rate. Thus, where a six-sigma threshold is found to not provide the desired reject rate, an eight or ten sigma threshold will provide an even tighter reject rate. For a six-sigma process, there are 3.4 defects per million opportunities. Note in comparison that a five sigma level of quality provides 233 defects per million. Thus, it would have been obvious to a person of ordinary skill in the art to change the sigma capability, that to increase or decrease the amount of confidence values along the bell curve that are taken based upon the number of defects, or in this case, the number of good coins rejected while rejecting unacceptable coins such as slugs.

Regarding Stieber, Applicant asserts that Applicants' claims do not read on Steiber because Stieber is allegedly "focused on network communication using Bluetooth specification..." See Steiber paragraphs 24-26 as cited by Applicant, line 4, p. 17 of Applicant's response.

While applicant focuses on use of Bluetooth, note that Steiber at paragraph 16, lines 10-14 lists not only Bluetooth, but also IrDA infrared standards, home RF, SWAP (Shared Wireless Access Protocol) and IEEE 802.11, which is the wireless lan (WLAN) standard.

Applicants' disclosure at paragraph 6, lines 1-8 mentions using communication to and from the currency acceptor using Bluetooth and 802.11 standards, both as also recited by Steiber. If Steiber's device cannot work using Bluetooth communication, then

Art Unit: 3653

Applicants are admitting that their device cannot work as well and is similarly inoperable.

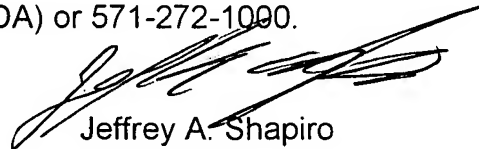
However, Steiber mentions transfer of information from and to cash device (13) as well as cash device (12). Even if the cash device (13) is a slave device to device (12), one ordinarily skilled would have recognized the capability of device (13) to transfer the information regarding a warning that a particular event has occurred, such as the attempted passing of a fraudulent coin into the machine. Note also that it would have been obvious to connect several cash machines (12) together, which each are disclosed as transferring maintenance and error conditions at paragraph 21. Note also that paragraph 26 discloses that piconets can communicate with each other.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is (571)272-6943. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick H. Mackey can be reached on (571)272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3653

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jeffrey A. Shapiro
Examiner
Art Unit 3653

January 6, 2008